

Application No.: 10/026,110

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for analyzing gene expression comprising:
obtaining expression levels of a plurality of genes;
selecting at least one biological characteristic from a plurality of biological characteristics stored in a database; wherein the biological characteristics comprise genomic information about the genes, structural information about the products of the genes; and biological function of the genes wherein the biological characteristics are described using a gene ontology system; ~~and~~
analyzing the expression levels according to the selected at least one biological characteristic; and
outputting results from the analyzing step.
2. (previously presented) The method of Claim 1 wherein the analyzing step comprises grouping the expression levels according to the selected at least one biological characteristic.
3. (previously presented) The method of Claim 1 wherein the analyzing step comprises selecting the expression levels for further analysis according to the selected at least one biological characteristic.

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4. (previously presented) The method of Claim 1 wherein the analyzing step comprises clustering according to the selected at least one biological characteristic.
5. (previously presented) The method of Claim 4 wherein the analyzing step comprises multiple dimensional clustering according to selected biological characteristics.
6. (previously presented) The method of Claim 6 wherein the analyzing step comprises data mining.
7. (Original) The method of Claim 1 wherein the plurality of biological characteristics comprise orthologous genes.

Claims 8-12 (cancelled)

13. (Original) The method of Claim 1 wherein the database is a relational database.
14. (Original) The method of Claim 1 wherein the database is an object oriented database.
15. (previously presented) The method of Claim 13 wherein the biological characteristics are retrieved using SQL (Structured Query Language) statements.

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16. (currently amended) A system for analyzing gene expression comprising a processor; and a memory being coupled with the processor, the memory storing a plurality of machine instructions that cause the processor to perform the method steps of
- obtaining expression levels of a plurality of genes;
- selecting at least one biological characteristic from a plurality of biological characteristics stored in a database; wherein the biological characteristics comprise genomic information about the genes, structural information about the products of the genes; and biological function of the genes wherein the biological characteristics are described using a gene ontology system; and
- analyzing the expression levels according to the selected at least one biological characteristic; and
- outputting results from the analyzing step.
17. (previously presented) The system of Claim 16 wherein the analyzing step comprises grouping the expression levels according to the selected at least one biological characteristic.
18. (previously presented) The system of Claim 16 wherein the analyzing step comprises selecting the expression levels for further analysis according to the selected at least one biological characteristic.

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19. (previously presented) The system of Claim 16 wherein the analyzing step comprises clustering according to the selected at least one biological characteristic.
20. (previously presented) The system of Claim 16 wherein the analyzing step comprises multiple dimensional clustering according to selected biological characteristics.
21. (previously presented) The system of Claim 16 wherein the analyzing step comprises data mining.
22. (Original) The system of Claim 16 wherein the plurality of biological characteristics comprise orthologous genes.

Claims 23-27 (Cancelled)

28. (Original) The system of Claim 16 wherein the database is a relational database.
29. (Original) The system of Claim 16 wherein the database is an object oriented database.
30. (Original) The system of Claim 28 wherein the biological characteristics are retrieved using SQL statements.

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31. (currently amended) A computer readable medium comprising computer-executable instructions for performing the methods comprising:
- obtaining expression levels of a plurality of genes;
 - selecting at least one biological characteristic from a plurality of biological characteristics stored in a database; wherein the biological characteristics comprise genomic information about the genes, structural information about the products of the genes; and biological function of the genes wherein the biological characteristics are described using a gene ontology system; ~~and~~
 - analyzing the expression levels according to the selected at least one biological characteristic; and
 - outputting results from the analyzing step.
32. (previously presented) The computer readable medium of Claim 31 wherein the analyzing step comprises grouping the expression levels according to the selected at least one biological characteristic.
33. (previously presented) The computer readable medium of Claim 31 wherein the analyzing step comprises selecting the expression levels for further analysis according to the selected at least one biological characteristic.

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34. (previously presented) The computer readable medium of Claim 31 wherein the analyzing step comprises clustering according to selected at least one biological characteristic.
35. (previously presented) The computer readable medium of Claim 31 wherein the analyzing step comprises multiple dimensional clustering according to selected biological characteristics.
36. (previously presented) The computer readable medium of Claim 31 wherein the analyzing step comprises data mining.
37. (Original) The computer readable medium of Claim 31 wherein the plurality of biological characteristics comprise orthologous genes.

Claims 38-42 (cancelled)

43. (Original) The computer readable medium of Claim 31 wherein the database is a relational database.
44. (Original) The computer readable medium of Claim 31 wherein the database is an object oriented database.

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45. (Original) The computer readable medium of Claim 43 wherein the biological characteristics are retrieved using SQL statements.